

REMARKS

Claims 1-12 are pending in the present application, with claims 1 and 4 being written in independent form.

I. Specification:

Although not objected to by the Examiner, Applicants editorially amend the specification to correct a typographical error.

II. Drawings:

Although not objected by the Examiner, Applicants amend Figs. 3b and 3d, by labeling the separate compensation winding with reference numeral 17 (as opposed to 16). These drawing changes are necessary to make the disclosure internally consistent.

III. Claim Rejection On Prior Art Grounds:

The Examiner rejects claims 1-12 under 35 U.S.C. § 103(a) as being obvious over DE 42 30 939 to Albrecht et al. ("Albrecht") in view of US 6,064,191 to Turner ("Turner"). Applicants respectfully traverse this rejection in view of the following remarks.

Independent claims 1 and 4 recite (among other things) "integrating a current signal supplied from the secondary winding." The Examiner recognizes that the primary reference to Albrecht is not pertinent to the claimed "integrating" feature, and thus looks to the secondary reference of Turner to allegedly make up for this deficiency. In so doing, the

Examiner attempts to rely on a modification of Albrecht that involves incorporating an integration circuit design as taught by Turner. This rejection position is incorrect for a couple of reasons.

A. *The Articulated Motivation Is In Error:*

According to the Examiner, those skilled in the art would have been motivated to implement the alleged modification “for the purpose of providing measurement of current at low frequency.” This is simply not understood, however, because Albrecht’s circuitry already provides a measurement feature for current at low frequency. Indeed, Albrecht expressly indicates that an advantage of the disclosed circuitry involves measuring ac current and dc current.¹ Applicants note that a dc current has a frequency of 0.

In short, those skilled in the art would not have been motivated to implement the alleged modification because the resulting device would provide no additional functionality or advantage. That is, those skilled in the art would not have been motivated to implement a feature that would serve no apparent purpose. At least in this regard, the rejection seems to be based on an impermissible hindsight of the present application.

¹ Applicants enclose an English language abstract of the Albrecht reference.

B. The Secondary Reference to Turner:

The secondary reference to Turner provides express teachings that would have led those skilled in the art directly away from the alleged modification. Specifically, Turner indicates (albeit as background) that conventional current transformers employ Hall elements arranged in a gap of a toroidal core. Turner goes on to provide a laundry list of shortcomings associated with Hall elements. The list includes (1) a non-linear response and displays dc offset characteristics that introduce error into measurements, (2) a small amplitude of voltage output that requires relatively large gain amplification, which may render the transducer unacceptably prone to noise, (3) being relatively expensive, and (4) taking up a significant amount of space.² To avoid these shortcomings, Turner employs an integrator, instead of the conventional Hall element. In this regard, Turner at least indirectly teaches that current transducers employ either a Hall element **or** an integrator, **but not both**.

At least for these reasons, Applicants respectfully submit that independent claims 1 and 4 are patentable, and that claims 2, 3, and 5-12 are patentable at least by virtue of their dependencies.

² Turner, col. 2, lines 28-63.

CONCLUSION

In view of the above amendments and remarks, an early indication of the allowability of all of the pending claims is earnestly solicited.

If any matters remain at issue in the application, the Examiner is invited to contact the undersigned at (703) 668-8000 in the Northern Virginia area, for the purpose of a telephonic interview.

Pursuant to 37 C.F.R. 1.17 and 1.136(a), Applicants respectfully petition for a two (2) month extension of time for filing a response in connection with the present application, and the required fee of \$430.00 is attached.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,
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By  _____
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DJD/HRH :ewd

THE DRAWINGS

The attached two (2) sheets of drawings include the following changes:

In Figs. 3b and 3d, reference numeral 16 is deleted in favor of "17."

Attachments: Replacement Figs. 3b and 3d.